Remarks

Rejection Under 35 U.S.C. § 112, first paragraph

Claims 3, 57-73, and 76-78 were rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventor had possession of the claimed invention. Claims 3, 57-73, and 76-78 were also rejected under 35 U.S.C. § 112, first paragraph, as not being enabled. Applicants respectfully traverse these rejections to the extent that they are applied to the claims as amended.

The very helpful telephone discussion and interview at the patent office are greatly appreciated. It is believed that claim 57, as amended, has full basis in the application as originally filed and complies with the written description requirement.

As discussed with the examiner, "Proposal 2 for the examiner" has been amended to include the phrase "in a gene of the genome of the microorganism" at the end of part (a) of Claim 57, so that part (a) reads:

(a) providing a plurality of mutant microorganisms wherein each mutant microorganism contains an insertional mutation which incorporates a different marker sequence in a gene of the genome of the microorganism"

As also discussed with the examiner, "gene" includes sequences such as promoter and terminator sequences that flank the coding region. The term "insertional mutation" refers to the incorporation of a different marker sequence in a gene of the genome and specifically includes

deletion/insertion mutations which incorporate the marker sequence. The patent specification supports insertion mutations other than random mutation. Please see, for example, page 11 of the original PCT application (WO 96/17951), which describes insertion-duplication mutagenesis (Morrison *et al*), insertional mutations using DNA fragments or plasmids (Smith *et al*) and REMI (Schiestl & Peters).

These insertion events are not random but involve a directed homologous recombination event (although the "directing" sequences may be random). The insertion-duplication mutagenesis (Morrison *et al*), insertional mutations using DNA fragments or plasmids (Smith *et al*) and REMI (Schiestl & Peters) methods all involve directed recombination and usually require homologous recombination for the insertion to occur in most pathogens. Furthermore, many transposons do not insert randomly, but have preferential insertion sites defined by DNA sequence motifs. These papers were previously submitted on June 12, 2001.

Rejection Under 35 U.S.C. § 102

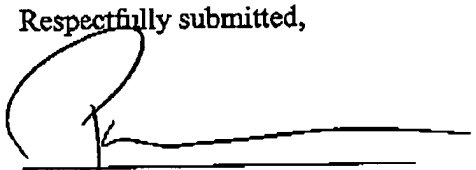
Claims 57-60, 64-66, 69-73, 76 and 78 were rejected under 35 U.S.C. § 102(b) as anticipated by Hensel et al. Science 269: 400-403 (1995) ("Hensel"). Applicants respectfully traverse this rejection to the extent that it is applied to the claims as amended.

Applicant filed a Request for Reconsideration of the Petition for Supervisory Review by the Commissioner on August 6, 2004. This application is a proper continuation of USSN 09/201,945 and USSN 08/637,759, and should be given the right of priority to these applications.

However, it is believed this issue is now moot in view of the foregoing discussion and amendments to the claims.

Allowance of claims 3, 57-73, and 76-78, as amended, is respectfully solicited.

Respectfully submitted,



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